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RUCPDOG/USDOC WASHDC
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RHEBAAA/DEPT OF ENERGY WASHDC

UNCLAS SECTION 01 OF 03 BRASILIA 000593

STATE PASS USTR FOR KDUCKWORTH
STATE PASS EXIMBANK
STATE PASS OPIC FOR DMORONSE, NRIVERA, CMERVENNE
DEPT OF TREASURY FOR JHOEK
DEPT OF ENERGY FOR CGAY, RDAVIS
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SUBJECT: HOW BRAZIL IS WIRED - ELECTRICITY SERIES #1

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11. SUMMARY: (U) This year will mark ten years since the denationalization of Brazil's electrical sector after fifty years of state control. The sector has undergone many changes during this period: from the days of former president Fernando Henrique Cardoso's ambitious drive to privatize the entire sector beginning in 1995; to the national energy crisis of 2001 which led to rationing; to the stalling of privatization efforts under the Lula administration; to the current situation with a fully subscribed system straining the limits of its infrastructure. As Brazil seeks to maintain and even improve upon its recent 5.4% GDP growth, electrical supply will present a continuing challenge and perhaps limitation. Mission Brazil will examine this sector in a series of cables to include the threat of a pending energy crisis, the effect of regional and international relations on the Brazilian energy sector, and the future of electrical generation and supply in Brazil. This first report focuses on the overall structure of the sector and serves as a reference resource for septels. END SUMMARY.

Policy and Regulatory Structure

12. (U) Although much of the electrical sector has been privatized in the past ten years, the GOB still retains a central and leading role throughout the system. Policy is directed from a ministerial committee called the National Council for Energy Policy (CNPE). The CNPE leads energy policy and provides guidance to the Ministry of Mines and Energy (MME) which sets electrical policy. MME's two arms which carry out this policy guidance are the Committee for Electrical Sector Monitoring (CMSE), tasked with assuring the security of electrical supply, and the Corporation for Energy Research (EPE), responsible for planning energy sector expansion.

13. (U) The regulatory agency, ANEEL, is nominally independent, but in fact reports to the Minister of Mines and Energy. ANEEL is

charged with running the auctions for new contracts for electrical generation and regulating the prices of transmission and distribution. ANEEL calculates tariffs annually based on the investments and costs incurred by electricity providers during the delivery of services. Using these figures, they follow the concession contracts that are issued by the National Destatization Council (which was responsible for setting the terms of private sector involvement in the process of privatizing the state-owned resources) to determine tariffs. ANEEL General Director Jerson Kelman told Econoff that the process rewards concessionaires' efficiency in maximizing use of their investments for higher productivity. ANEEL also factors in an index of customer satisfaction, allowing the better performing companies to retain a higher share of profits.

14. (U) At the time of ANEEL's creation in 1996, the average Brazilian consumer experienced interruptions in energy supply an average of 21 times per year, for a total of over 26 hours. Now, ANEEL proudly notes that it receives less than a quarter of the amount of service complaints that it received at its inception and consumers now experience 11.7 interruptions with a loss of approximately 16 hours; averages that have remained relatively consistent since 2002.

15. (U) Brazil's central operating system is run by the National Operator for the Electric system (ONS). ONS is responsible for the integration of the system and insuring the continuous generation, transmission, and distribution of electricity throughout the country. The final institution involved in the Brazilian electrical structure is the arm of the government responsible for the commercialization of electricity, the Chamber of Commercialization of Electrical Energy (CCEE). Much of the electrical system is owned

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by the state electric company, Eletrobras.

16. (SBU) At the top of this labyrinthine system is the new head of MME, Minister Edison Lobco, a former journalist and politician with no particular energy expertise. He has pledged to surround himself by subject matter experts (appointments so far bear this out) and most sector observers tell us that since the position requires political skills more than subject matter expertise, they are comfortable with this. In a recent meeting with the Brazil-U.S. Business Council and separately with El Paso Energy, he avowed himself to be a friend to industry and in favor of power sector privatization. He also stressed the importance he places on transparency in Ministry decision-making. In a recent Seminar in Rio, Minister Lobco emphasized that the MME has to be obsessive towards honoring contracts to avoid investor's skepticism (Note: In a courtesy call with the Ambassador, Lobco also struck us as straightforward and positively inclined towards the U.S. End Note.)

Generation Capacity

17. (U) Brazil's 172 power plants (hydroelectric and thermal, including two nuclear plants) are operated by 80 different agents, public and private. In planning for the next five years, ONS predicts only moderate shifts in sources of generation. Conventional thermo power will rise from 11,600 MW (12%) of installed capacity to 17,000 MW (16%) whereas hydroelectric power which currently represents 83% of installed capacity at 81,500 MW, will decrease to just under 80% of the share, projected to be 85,000 MW in 2011. Because hydroelectric power is much cheaper to produce, hydro made up 93% of the amount of electricity actually generated for 2007. Nuclear capacity will remain the same for the short term contributing just 2% to the electrical supply. The sugar cane industry association (UNICA) also indicates that they will increase the production of electricity through bagasse. (Specifics on electrical generation and future plans will be reported septels.)

Transmission - SIN and Chavez

¶8. (U) The transmission of electricity in Brazil is handled by 52 different agents with over 81,000 kilometers of transmission lines, 731 circuits, and 367 substations. The vast majority of the country is covered by the integrated transmission system (SIN) operated by ONS. Any lines that transmit over 230 kilovolts must be made available to ONS as part of the SIN. Only a small portion of the population is outside of the grid currently. A substantial part of the unintegrated areas will be brought into the system this year. The linkage of the northwestern states of Acre and Roraima to Mato Grosso is expected to be completed by 2010, with more areas in Manaus and Amapa in the north of Brazil being incorporated by 2012. This will complete the integration plan but will leave the remote border state of Roraima out of the integrated system. Roraima will continue to be dependent on Venezuela as its source of power.

¶9. (U) This integrated transmission system means that even though regions such as the Northeast do not receive sufficient rains to generate their own electricity, they are able to get 40% of their electricity from the more abundant hydropower of the southeastern population centers. The transmission system permits officials to compensate for rainfall shortages in some areas, by directing energy from others. It also means that a significant portion of the Brazilian population is vulnerable to energy loss from breaks in the transmission lines. Brazil's two largest cities are dependent on the transmission line from the Itaipu dam. "If something happens to the Itaipu line," energy consultant Hector Morreno told Econoff, "Rio and Sao Paulo would go black." In Morreno's estimation, "Brazil still has a long way to go" in improving transmission.

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¶10. (U) As the GOB is looking at ways to diversify its sources of electrical energy, the transmission system will be critical in facilitating that change. Currently, the main impediment to incorporating bioelectricity produced from ethanol plants into the grid is that the sugar mills in Mato Grosso do Sul and Sao Paulo states are not integrated into the transmission lines. To address this limitation, the GOB is in discussions with state governments and producers to determine how to fund new transmission lines.

Distribution

¶11. (U) The distribution system is dominated by private industry with 106 different distributors involved. Of the actual cost passed on to consumers, a portion goes to taxes which include the cost of programs such as "Luz para todos," a government program similar to rural electrification, and another assistance program that subsidizes electricity for poor families. (Note: "Luz para todos" or Light for All is a program sponsored in part by USAID. End Note.)

¶12. (SBU) ABRACEEL's Pedrosa believes that some of this year's concern over a possible energy shortage (which experts now agree will not happen this year), could have been alleviated if free market forces were brought to bear. He told Econoff that the demand level could have self-corrected if changes in the electrical supply, such as the Argentina's inability to fulfill its contract to sell 6,000 MW of electricity to Brazil, had been passed along to consumers allowing the price to fluctuate in a market-driven way. Pedrosa notes that the cost will eventually be passed along in later years through higher direct energy costs or more expensive national products. Alexandre Innecco, CFO of AES Electropaulo in Sao Paulo, shared Pedrosa's view of market distortion, telling Econoff that, because of the pricing structure, consumers have no price signal to reduce consumption.

¶13. (SBU) COMMENT: As the GOB seeks to expand its electrical supply capabilities with diverse sources, it will face numerous challenges. One issue the GOB will have to decide is whether to continue privatization efforts or consolidate. The recently approved "Super Eletrobras" bill, which removes the requirement that the state owned

electric company not own more than 49.19% of energy consortiums, gives rise to speculation about the prospects for further privatization. Meanwhile, Brazil must begin to diversify their sources, as the current hydro-heavy matrix is highly vulnerable to drought, with the specter of rationing or blackouts looming during less than sufficient rainy seasons. Energy security is a growing concern throughout the Southern Cone region and, accordingly, geo-politics also figures heavily in Brazil's ability to meet its electricity needs. Each of these issues will be addressed in future cables in this series. The next cable will focus on the generation capacity of the Brazilian electrical sector. END COMMENT

114. (U) This cable was jointly produced by Embassy Brasilia, Consulate Sao Paulo and coordinated throughout the mission.

SOBEL